

What is Claimed Is:

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1. A transparent conductive layered structure, comprising a transparent substrate, a transparent conductive layer, and a transparent coating layer, the transparent conductive layer and the transparent coating layer being formed successively in this order on the transparent substrate;

wherein the main components of said transparent conductive layer are gold microparticles or gold-containing noble metal microparticles containing 5 wt% or more of gold with a mean particle diameter of 1 to 100 nm and a binder matrix comprising at least one functional group selected from mercapto groups (-SH), sulfide groups (-S-), and polysulfide groups (-S_x-, X ≥ 2).

2. A transparent conductive layered structure according to Claim 1, wherein the gold content in the gold-containing noble metal microparticles is set within a range of 50 to 95 wt%.

3. A transparent conductive layered structure according to Claim 1, wherein the gold-containing noble metal microparticles are gold-and-silver 2-component-type microparticles.

4. A transparent conductive layered structure according to Claim 1, wherein the main component of the binder matrix of the transparent conductive layer is silicon oxide.

5. A transparent conductive layered structure according to Claim 1, wherein the transparent coating layer has as its main component silicon oxide and comprises at least one functional group selected from mercapto groups (-SH), sulfide groups (-S-), and polysulfide groups (-S_x-, X ≥ 2).

6. A transparent conductive layered structure according to Claim 1, wherein the transparent conductive layer has a surface resistance of 5 to 3,000 Ω/□, and wherein a standard deviation of transmittance of a transparent 2-layered film, not including the transparent substrate and consisting of the transparent conductive layer and transparent coating layer, is 0 to 5% at each wavelength in 5 nm intervals in a visible light ray wavelength range (380 to 780 nm).

7. A method of producing a transparent conductive layered structure having a transparent substrate, a transparent conductive layer and a transparent coating layer, the transparent conductive layer and the transparent coating layer being formed successively in this order on the transparent substrate, comprising the steps of:

applying a coating liquid for forming a transparent conductive layer to a transparent substrate, the main components of the coating liquid being a solvent and gold microparticles or gold-containing noble metal microparticles containing 5 wt% or more of gold with a mean particle diameter of 1 to 100 nm, dispersed in the solvent;

thereafter applying a coating liquid for forming a transparent coating layer, whose main components are a binder, a solvent and a functional group-containing compound having at least one functional group selected from mercapto groups (-SH), sulfide groups (-S-), and polysulfide groups (-S_x-, X ≥ 2); and

performing heat treatment.

8. A method of producing a transparent conductive layered structure having a transparent substrate, a transparent conductive layer and a transparent coating layer, the transparent conductive layer and the transparent coating layer being formed successively in this order on the transparent substrate, comprising the steps of:

applying a coating liquid for forming a transparent conductive layer to a transparent substrate, main components of the coating liquid being a solvent, gold microparticles or gold-containing noble metal microparticles containing 5 wt%

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or more of gold with a mean particle diameter of 1 to 100 nm, dispersed in the solvent, and a functional group-containing compound having at least one functional group selected from mercapto groups (-SH), sulfide groups (-S-), and polysulfide groups (-S_x-, X ≥ 2);

thereafter applying a coating liquid for forming a transparent coating layer whose main components are a binder and a solvent; and

performing heat treatment.

9. A method of producing a transparent conductive layered structure according to Claim 7 or 8, wherein the gold content of the gold-containing noble metal microparticles is set within a range of 50 to 95 wt%.

10. A method of producing a transparent conductive layered structure according to Claim 7 or 8, wherein the gold-containing noble metal microparticles are gold-coated silver microparticles in which the surface of silver microparticles is coated with gold.

11. A method of producing a transparent conductive layered structure according to Claim 7 or 8, wherein the binder is an inorganic binder whose main component is silica sol.

12. A method of producing a transparent conductive layered structure according to Claim 7 or 8, wherein the coating liquid for forming a transparent conductive layer comprises an inorganic binder whose main component is silica sol.

13. A coating liquid for forming a transparent coating layer [used in the method of producing a transparent conductive layered structure according to Claim 7,] comprising, as its main components, a solvent, a binder, and a functional group-containing compound having at least one functional group selected from mercapto groups (-SH), sulfide groups (-S-), and polysulfide groups (-S_x-, X ≥ 2),

wherein the mixture ratio of the binder and the functional group-containing compound is 0.1 to 50 parts by weight functional group-containing compound per 100 parts by weight binder.

14. A coating liquid for forming a transparent coating layer according to Claim 13, wherein the binder is an inorganic binder whose main component is silica sol.

15. A coating liquid for forming a transparent coating layer according to Claim 13 or 14, wherein the functional group-containing compound is a compound containing in its

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molecules hydrolyzable alkoxysilyl groups or functional groups produced by hydrolysis of these groups.

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16. A coating liquid for forming a transparent conductive layer used in the method of producing a transparent conductive layered structure according to Claim 8, comprising, as its main components, a solvent, gold microparticles or gold-containing noble metal microparticles containing 5 wt% or more of gold with a mean particle diameter of 1 to 100 nm, dispersed in the solvent, and a functional group-containing compound having at least one functional group selected from mercapto groups (-SH), sulfide groups (-S-), and polysulfide groups (-S_x, X ≥ 2).

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17. A coating liquid for forming a transparent conductive layer according to Claim 16, wherein the gold content of the gold-containing noble metal microparticles is set within a range of 50 to 95 wt%. *Of which*

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18. A coating liquid for forming a transparent conductive layer according to Claim 16 or 17, wherein the gold-containing noble metal microparticles are gold-coated silver microparticles in which the surface of silver microparticles is coated with gold.

19. A coating liquid for forming a transparent conductive layer according to Claims 16 ^{or 17} ~~to 18~~, containing an inorganic binder whose main component is silica sol.

20. A coating liquid for forming a transparent conductive layer according to Claims 16 ^{or 17} ~~to 19~~, wherein the functional group-containing compound is a compound containing in its molecules hydrolyzable alkoxyethyl groups or functional groups produced by hydrolysis of these groups.

21. A display device comprising a device body and a front panel arranged on the front side of the device body, wherein the transparent conductive layered structure of Claims 1 to 6 is incorporated in the display device as the front panel with the transparent 2-layered film side facing the outside.

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